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The story of JEFFERSON *National Forest*

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On the cover: New River
near Rich Creek, Virginia.
Many streams and rivers
find their sources in forested
watersheds.

Foreword

The small boy yawned, checked himself, struggled hard to sit erect, yawned again and finally surrendered with his head nestled in his mother's lap. After all, of what interest are even the most vital resources to a three-year old who has spent most of the day building, bombarding, destroying, and rebuilding castles, canals, and lakes on a clean sandy beach.

Not so with the adults who had gathered around a bonfire during the dusk of an Appalachian evening to listen to a trim young man in the bronze-green-heather of a Forest Ranger. Gathered to hear him talk of trees and small plants, of bear and deer, of water and mountains, of forest fires and tree diseases and soil erosion. Of all the materials forest land can produce, of all the values and benefits a forest harbors.

Forests of oak and hickory, of pine and hemlock, of beech and poplar, providing superb settings for enjoyment of the great outdoors, producing goods for man's needs and comfort; streams, rivers, and lakes supplying him with water; rugged mountains rising to sharpened peaks and rounded ridges; fish and game and other woodland residents . . . these are features the Ranger talked about. He spoke of them not as separate items but in combination on land owned by his listeners and their fellow Americans—a combination known as Jefferson National Forest.

This is the story of that great public estate and its resources.

Forest Resources Helped Build The Nation

Establishment of Jamestown in 1607 is among the important experiences in the history of this Nation. There the Colonists built homes, a church, a school, a stockade, and other structures of logs from the forest. They hunted wild animals in the forest for food and skins. From streams and rivers flowing past hillsides that, through the ages had been clothed with trees, they drew water for many uses.

In the centuries since Jamestown, the United States has become a great Nation. Forest resources have been prominent in the building of that Nation and continue to play an essential role in the lives of American people. They always will.

Intensive use of forest resources, a century and more ago, was based on the assumption that American forests were endless as, in fact, they were when little used. But as America developed, timber cutting, land clearing, fire, and erosion began to deplete forest resources at a rapid rate. Late in the 19th Century, people began to sense that natural resources were not without limit, that the United States needed to exercise care in their use.



Excessive land clearing, forest fires, and erosion depleted forest resources and reduced the ability of the land to support people.

As this need for care with forest resources became more and more apparent, many people and organizations petitioned the United States Congress to authorize purchase of forest land for scientific management by the Department of Agriculture. A memorial presented to Congress in 1900 closed with the classic expression — “And your petitioners will ever pray” — a phrase that amply expresses the concern of the petitioners.

The efforts bore fruit. During the decade following presentation of the first memorial to Congress, not less than 40 legislative proposals were introduced. They varied in detail but had a common objective — to authorize the Secretary of Agriculture to buy land for National Forests which would be added to those earlier created in the West from land already publicly owned. Cooperation between the Federal Government and the States in forest fire protection was another provision in some of the later proposals.

Finally, a measure sponsored by Congressman John W. Weeks of Massachusetts, proved acceptable to both houses of Congress. The expressed purpose was protection of the headwaters of navigable streams. The measure made provision for establishment of National Forests and for intensive forest fire protection on the upper tributaries of such rivers.

The Weeks law was approved by President Taft on March 1, 1911. This law, together with related legislation enacted by the States in which the area is located, constitutes the legal basis for Jefferson National Forest.

Unaka

In the establishment of a National Forest under the terms of the Weeks Law the first step is selection of a purchase unit. Boundaries of a proposed unit are designated by the Department of Agriculture. Purchase of land may be initiated after approval by the National Forest Reservation Commission; a Commission established by the Weeks Law that includes the Secretaries of the Army, Interior, and Agriculture, two members of Congress, and two Senators.

Within a month after approval of the Weeks Law, a number of purchase units were established. Two units, the White Top and the Natural Bridge, were partly in Virginia. The former is named after a mountain peak in the southwestern part of the State, while the latter bears the name of a prominent geological feature northeast of Roanoke.

White Top unit was later renamed Unaka purchase unit, Unaka being a Cherokee Indian word for white or white clay. As used in this connection, the word almost certainly referred to the haze which frequently surrounded the summits of the Blue Ridge Mountains.

Purchase of land commenced very soon after establishment of the purchase unit. In April 1911, Major William A. Anderson of Lexington, Virginia, Executor of the Glenwood Estate, offered to sell the land of that estate to the United States for National Forest purposes. Two years later title to the land, aggregating nearly 25,000 acres, passed to the United States and became the nucleus of a National Forest. Additional purchases have increased the acquired area to its present size — 546,636 acres.

In 1936 portions of the Unaka and Natural Bridge units and small areas in Kentucky, and West Virginia were combined into one National Forest and given the name of the distinguished Virginian

and early President of the United States, Thomas Jefferson. Within its outer limits, Jefferson National Forest includes an area of nearly 1.7 million acres of land.

One of the notable characteristics of forest land is its ability to produce a wide variety of resources, values, and benefits. In National Forest practice, these are carefully managed and intensively developed in order that the area may be of maximum benefit to its owners — the people of the United States.

The major resources of Jefferson National Forest are water, recreation, timber, and wildlife. How each one is managed in combination with the others and made available for public use and enjoyment constitutes an interesting story.

We Use Lots Of Water —

325 billion gallons now,
600 billion gallons in 1980,
900 billion gallons in 2000, — EVERY DAY

The first figure, 325 billion gallons, represents the average daily use of water in the United States at the present time. Estimated daily needs in 1980 and in 2000 are indicated by the latter figures.

Those estimates apply only to consumptive forms of use. Much more water is needed for navigation, recreation, sanitation, generation of hydro-electric power, and other purposes. Little wonder that water is the number one forest product, the key item in National Forest management.

Jefferson National Forest watersheds directly supply 62,000 inhabitants of 12 communities in Southwestern Virginia whose needs total 9 million gallons a day. Those communities are within or near the National Forest but the effects of watershed management are farther-reaching. Jefferson National Forest includes the headwaters of some large streams — the James, the New, the Roanoke, the Holston, to name a few. Some are tributary to major rivers — the Tennessee and the Ohio. Thus, resource management on Jefferson National Forest influences the volume and quality of water available to millions of people and thousands of industries lining the banks of some of the largest streams in the Eastern States.



Clean water from well-managed watersheds serves many needs — recreation, wildlife, domestic and industrial use.

*“... a pure river of water
of life, clear as crystal...”*

Responsibilities in watershed management are clear. They are accepted by Forest Supervisor Bill Curnutt and his associates who give water production every consideration in National Forest activities. Development of physical improvements, management of material resources, use of recreation facilities, harvest of forest products — in all activities, care is taken to make sure that streams emerging from Jefferson National Forest will carry a satisfactory volume of clean water. Erosion and sedimentation are controlled, and measures are taken to repair “sore spots” that are not in good hydrologic condition.

In connection with watershed repair work, special mention should be made of accomplishments on areas mined for manganese some years ago. Mining activities removed the surface vegetation and left the areas in highly erosive condition. Gullying, sheet erosion, and sedimentation followed. Repair measures consisting of surface grading, building check dams, and revegetation with trees or with plants of value for game food, are being applied. This work is effectively restoring the ability of the areas to produce valuable resources including clean water.

Enjoy A National Forest Vacation

Millions of people visit National Forest recreation facilities each year. Adults enjoy them; young people have the times of their lives. Jefferson National Forest is prepared to take care of large numbers of visitors and will welcome you among them.

Recreation facilities vary in size and type from little hunter camp sites to the more elaborate developments of High Knob and Cave Mountain Recreation Areas. A hunter camp site consists only of a grill, picnic table, refuse can, and tent pad, while the High Knob and Cave Mountain areas provide family picnicking, camping, swimming, and a wide range of other leisure-time activities.

High Knob is near Norton and the improvements include a lake with a sandy beach and bath house, a water system, sanitary facilities, picnic tables, fire grates, tent sites, foot trails, an open playfield, and a large parking area. High Knob Observatory affords a splendid view of the countryside from an elevation of 4,200 feet.

Cave Mountain Recreation Area, a few miles southeast of Natural Bridge, has facilities similar to those at High Knob. Nominal fees are charged for use of these developments.

Recreation facilities of Jefferson National Forest, in addition to hunter camp sites, Cave Mountain, and High Knob, include developments which provide chiefly picnicking and camping. These areas are numerous and cannot all be described here, but they are listed in the statistical section at the end of this booklet. They may be used without charge.

Leisure-time activities people enjoy while camping or picnicking at National Forest recreation areas include — rock collection, sight-seeing, photography, hunting, fishing, visiting points of historic or geologic interest, hiking on woodland trails, or just relaxing.

An interesting recreational feature of the mountain country is the Appalachian Trail. This trail traverses 148 miles of Jefferson National Forest with Adirondack type trail shelters spaced an easy day's hike apart.

Points of interest are numerous within or near Jefferson National Forest, and include a number of old-time iron furnaces. Those on Roaring Run and at Glenwood are well-preserved and easily accessible. Iron ore was processed at these sites more than 100 years ago and they continued in operation until after Civil War times, when more modern facilities with richer ore deposits displaced them.

Minie Ball Hill, located on Big Mountain in Giles County, is of interest because of an event which occurred there during the Civil War. Some Union Army supply wagons hard pressed by Confederate troops, became mired in mud. Supplies had to be discarded to lighten the loads. Lead bullets, known as Minie balls, are still found along the route.

Salt Sulphur Turnpike, in the same vicinity as Minie Ball Hill, is one of the oldest roads in this part of the country. Vacationers traveled this route by stage coach more than a century ago on the way to Salt Sulphur Springs in West Virginia.

Mountain Lake Biological Station of the University of Virginia is near Pembroke. It affords opportunity for graduate studies and research in biology. Mountain Lake, one of the few natural lakes in Virginia, is adjacent.

Mount Rogers, with an elevation of 5,729 feet, is the highest peak in the Old Dominion. The most northerly stand of Frazer Fir (balsam) caps this mountain making it unique among the forests of Virginia. Mount Rogers is sometimes referred to as “. . . a bit of Canada in southwestern Virginia.” Much of the vegetation is of types more frequently seen in northern latitudes.

Old Indian trails and the sites of skirmishes between Indians and early-day settlers may be seen in this territory, particularly in Wise and Lee Counties. Cherokee Indians from the South and Shawnees from the North made hunting expeditions to the great valley and battled one another on the headwaters of the Clinch River in 1786. Chief Bengé, a notorious leader of raiders from the North, led raids not only against the Cherokees, but also against the homes of pioneer families.

Daniel Boone traveled in this vicinity more than 200 years ago on land now traversed by U. S. Route 11.

Part of the National Forest is in the watershed of the Tennessee River. Some features of the Tennessee Valley Authority, notably the Holston Reservoir and Dam, may be observed in this vicinity.

For the scientist and naturalist the entire region affords an almost endless source of study involving the plants and animals of the Mid-South and the Appalachian region.

Recreation areas and points of interest are readily accessible. Directions to them may be obtained from the Forest Supervisor's office in Roanoke or from the Forest Rangers whose addresses are given later.



Family picnicking, camping, organization use, swimming, sight-seeing, photography, visiting points of interest — these and many other forms of recreation are enjoyed by many on Jefferson National Forest.



Timber-A Sustained Yield Product

When the American Colonies became the United States the lands now within Jefferson National Forest supported forest resources of high quality in abundance. Here, the forests characteristic of the Southern Appalachians merged with timber of northern types, resulting in a number and variety of tree species not exceeded in any forest region.

During the 19th Century, great strides of national development reached into the Appalachian Mountains. Large areas of forest were cleared as hardy farmers moved into the forested coves and ridges. Lumbering started with small mills along the streams but expanded into large operations. By the middle of that century a lot of mountain land had been cleared.

Later, many of the early settlers abandoned those hillside farms and moved into more fertile and more easily cultivated valleys. Now foresters, hunters, and others who frequent the mountains, sometimes come upon tracts of land where pioneer families had hewed farms out of the wilderness. Evidence may consist of remnants of a fireplace, a stone fence, or the skeleton of a structure that was a home. Many fields, once pastured or cropped, have reforested with dense stands of trees.

The pulpwood shown here has since been made into paper. Some of it may have been used in wrapping parcels for you.



A typical abandoned field of this type is located on McFalls Creek in Jefferson National Forest near Buchanan, Virginia. The timber, not yet mature, consists of valuable white pine and poor-quality hardwoods.

Recently the Forest Service made a sale of timber on this area. The sale is actually an improvement cutting in which low-quality trees are being removed for conversion into pulp and paper. Their removal will improve the quality of the reserved stand and speed up growth. Reserved trees will be pruned to improve the quality of the timber they will produce. In about 20 years another harvest will be made and it will consist of sawtimber of high grade. That sale also will be in the form of a partial cutting with many trees reserved for continued production of timber and reseedling of the land.

This case is cited because it illustrates the type of timber management practiced on Jefferson National Forest. Trees that are mature, diseased, misshapen, or of low-value, are removed in sales to responsible parties. This is true, not only in old-field timber, but also in second-growth stands resulting from early cuttings. Always, enough trees of good quality are retained to permanently maintain production of good timber in large quantities.

Timber harvests on Jefferson National Forest total about 14 million board feet in volume per year and are increasing as intensive management and protection result in more rapid production.

Harvesting this timber and converting it into consumer goods provides employment for large numbers of people and support for their families. It is an important item in the economy of the area and the entire State. The wood-using industries of Virginia number more than 1,000 installations, and employ 50,000 people with a payroll of almost \$200 million per year. These industries produce pulp and paper, veneer and plywood, lumber, flooring, furniture, charcoal, and other items for human needs and comfort with a value of \$800 million annually.



Carefully managed forests produce a sustained yield of good timber and many other benefits.

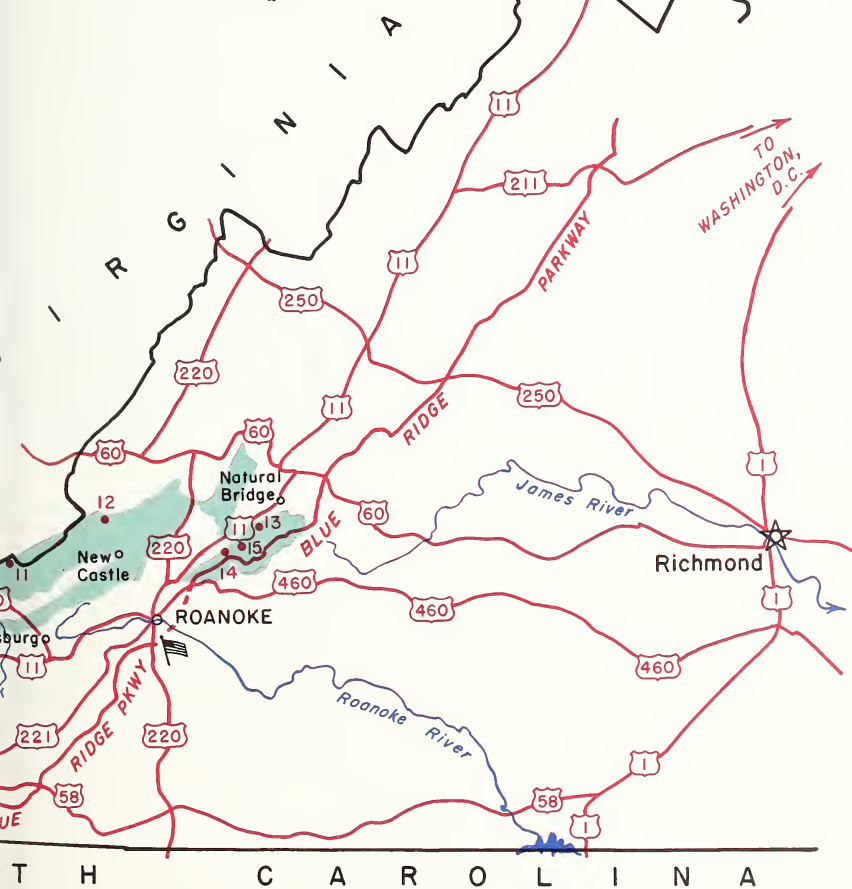
Where thinnings or improvement cuttings cannot be made by sale of the products the Forest Service employs local people to do the work under skilled leadership. To date 19,000 acres have been improved and much more is planned. In further development of timber resources, more than 3,000 acres of idle land have been planted with trees.

These activities are carefully planned and directed by professional foresters. They produce measurable results. More and more timber of better and better quality is becoming available for conversion into useful goods. The volume which should be harvested now in good forestry practice is 50 percent greater than the corresponding item of only 20 years ago.

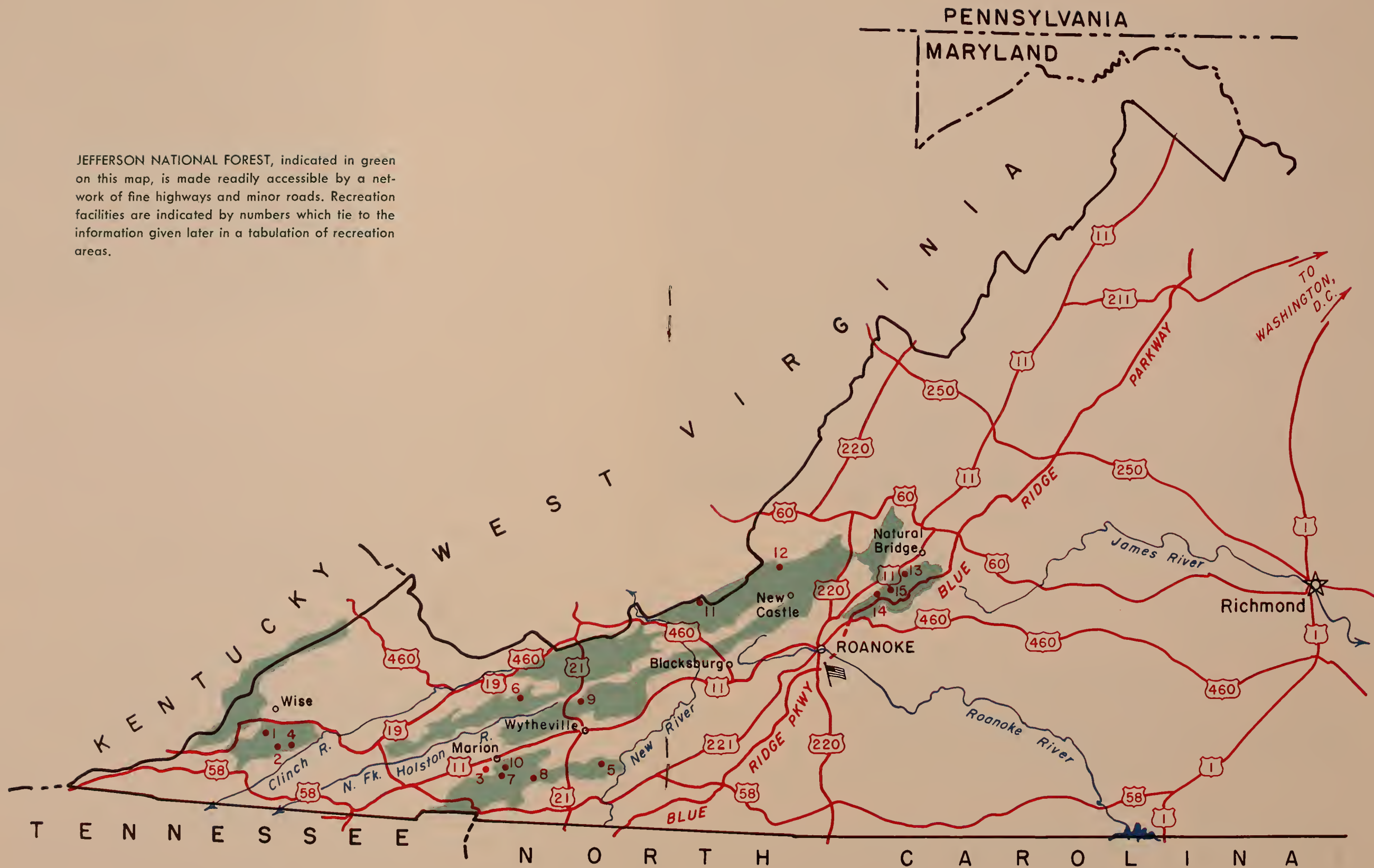
Careful husbandry practiced in the management of timber resources results in a *sustained yield* of forest products. That term, *sustained yield*, is an important one in the Forester's vocabulary and in the management of the Nation's natural resources. It refers to the fact that the well-managed forest continuously produces resources of superior quality.

JEFFERSON NATIONAL FOREST, indicated in green on this map, is made readily accessible by a network of fine highways and minor roads. Recreation facilities are indicated by numbers which tie to the information given later in a tabulation of recreation areas.





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"The Bountiful Hunting Ground"

"We killed in the Journey 13 Buffaloes, 8 Elks, 53 Bears, 20 Deers, 4 Wild Geese, about 150 Turkeys, besides small game."

This quotation is from the journals of Dr. Thomas Walker who, in 1750, led a surveying party through Southwestern Virginia. No longer do buffalo roam here and elk are few, but otherwise, from a wildlife standpoint, it is much the same as when it was the bountiful hunting ground of the Cherokee Indian 200 and more years ago.

With wildlife, as with timber, the objective in National Forest practice is to produce a maximum quantity for legal harvest while maintaining an adequate *growing stock* to insure sustained production. This objective is being attained on Jefferson National Forest. Wildlife populations have increased materially since an intensive program was initiated in 1938. This increase has taken place even in the face of a tremendous expansion in hunting and a big increase in the number of animals taken.

If one were to select a word that, more than any other, could be used to account for the improvement in hunting on this land, that word would be "cooperation." In 1938 a cooperative wildlife program, now known throughout the Nation as the Virginia Plan, was initiated. The cooperators are the Virginia Commission of Game and Inland Fisheries and the U. S. Forest Service. By the terms of an agreement, which is amended when necessary, a program for development of wildlife resources is jointly prepared and administered. Three trained wildlife biologists of the Virginia Game Commission, 15 game managers, and a number of laborers work together for the benefit of wild animals and sport fish.

A person wanting to hunt or fish on Jefferson National Forest (or on George Washington National Forest in the same State) needs to purchase, at a cost of \$1.00, a National Forest stamp as well as a State hunting or fishing license. Income from this source has increased from \$11,690 in 1938 to more than \$110,000 per year for both National Forests. It is spent chiefly in improving habitat for fish and wildlife.



Carefully improved streams provide excellent sport fishing.

*"... the tree of the field
is man's life ..."*

A major item in habitat improvement is preparation of wildlife clearings or openings. More than 900 have been prepared and they total over 4,000 acres in area. Many more are planned. In these clearings a natural succession of small plant growth takes place and is supplemented by seeding with bluegrass, orchard grass, fescue, and clover. A few trees selected for value as game food may be planted in a clearing. Trees used are Chinese chestnut, autumn olive, and apple. Pine trees are sometimes planted around the edges to provide protection and escape cover for small animals and birds.

Wildlife needs are carefully coordinated with timber management activities. Timber improvement and harvesting operations, as a result of this coordination, materially improve game habitat over large areas of National Forest land.

Wildlife clearings are intensively used by game animals and birds and are chiefly of benefit to deer, turkey, grouse, quail, and rabbits. Grouse most frequently nest near the clearings because insects, palatable especially to young birds, tend to congregate in these areas.

Waterholes have also been provided as a feature of habitat improvement. Usually they are placed on dry ridges at natural springs, but some are dependent upon rainwater.

Wildlife on Jefferson National Forest includes an animal rarely found east of the Great Plains, the elk. These splendid game animals formerly were common in Eastern forests but were eliminated by settlement. Some years ago, however, a few were brought into Virginia from the West and they have about held their own in numbers.

Predators and fur bearers, including the fox, bobcat, skunk, possum, beaver, mink, weasel and muskrat, are quite numerous.

Experimenting is not unknown in the wildlife field. Recently 165 Kalij pheasants from India were stocked here. These fine game

birds, almost as large as other pheasants, have habitat requirements similar to those of the native grouse. They appear to be doing well in the new environment.

Sport fishing receives similar consideration on Jefferson National Forest and benefits from the same cooperative efforts as does game. More than 1,000 miles of streams are in these mountains and 500 miles are rated fishable. They are stocked each year with brook and rainbow trout under the provisions of the cooperative program.

Some of the stamp income and funds from other sources have been used in the development of 18 fishing impoundments. They are stocked with bass, bluegills, and sometimes with trout depending upon the condition of the water in the individual pond.

Fishing, like hunting, is an exceedingly popular pastime and accounts for many visits to Jefferson National Forest.

A National Forest - A Land Of Many Uses

Water, facilities for outdoor recreation, timber, fish, game animals, and birds, are the major forest resources. They, and many others produced in abundance on Jefferson National Forest, are available for appropriate use by people.

A list of permitted uses of National Forest land and resources, in addition to those already indicated, includes a large number and variety — agriculture, water transmission, pastures for livestock, prospecting and removal of minerals, building of many kinds of physical improvements and structures — to name only a few. Permits for resource use are issued under conditions that will not interfere with continued productivity — with a *sustained yield* of forest products. Mining, for example, is permitted by methods that will not impair surface values or reduce the ability of the land to produce manageable items such as timber, water, and wildlife.

Most uses of forest resources are compatible with one another — rarely does use of one conflict with development of another. Scientific harvesting of timber, for instance, is normally beneficial to wildlife because of the increase in small plants and browse that follows cutting. Nor is recreation or scenic value likely to be reduced. The cut-over area quickly regains an attractive appearance.

This form of management in which renewable resources are managed for continuous production to satisfy human needs and desires might be called conservation through use, or planned use, or use with provision for replacement. *Frequently and properly it is called multiple-use management.* It recognizes the need for continuous production of all resources on a planned, coordinated basis, to support life in a complex society dependent upon a wide variety of goods.

Because so many resources and values are involved and because National Forests serve so many purposes and so many people, administration of one is a complex proposition. Protection against physical destruction and damaging factors is a job of high priority.

McAfee Gap, April 20, 1963

Virtually every acre of forest land sometimes experiences a condition fire fighters call *fire weather*. It is a term applied to a combination of factors that determine how readily a fire may start and how rapidly it will spread.

Severe fire weather was experienced in Virginia, and other portions of the East, in the spring of 1963. Rainfall was extremely limited, temperatures were consistently high and humidity as consistently low. Unusually strong winds increased the risk and hazard. The litter on the forest floor, the material that sustains fire once it starts, became exceedingly dry.

At 3:15 P.M. on April 20, a motorist going through McAfee Gap, not far from New Castle, Virginia, noticed a column of smoke, then bright red flames. Hurrying to a roadside store, he transmitted the information to the Ranger's Office in New Castle.

Action was immediate and sure for the Ranger and his protection forces were prepared. They sped to the scene, but before they could reach it, a wind of gale proportions had carried the flames forward two miles. In less than three hours from first discovery of the fire, 1740 acres of forest lay seared, dead.

With burning conditions so severe, it is a tribute to the skill and determination of the National Forest fire organization that the fire was stopped before an even greater area of forest was destroyed.

Fire, if not the most destructive element in the forest, is definitely first in speed and totality of destruction. Recognizing that fact, a National Forest organization is always ready to act swiftly and forcefully when a fire occurs. Fire fighters are organized and trained, equipment is in first-class condition, transportation is on hand, air-tanker and helicopter crews are alert. At the first report of a fire, men and equipment are on the way. Skilled, seasoned fire bosses and crew leaders direct the attack.

On Jefferson National Forest, this ever-ready, ever-trained, ever-alert, fire organization has a very fine record — even in spite of occasional seasons when burning conditions become almost incredibly severe and fires of major proportions develop as at McAfee Gap. In the average year 21 forest fires occur, and burn a total of only 62 acres of National Forest land — well within acceptable limits.



From a volume standpoint, forest insects and diseases, though far less spectacular, cause greater damage than forest fires. Bark beetles, weevils, gypsy moths, tent caterpillars, oak wilt, ash dieback, blister rust, decay-inducing fungi — the list of tree enemies is almost endless — are more destructive than forest fires. Constant vigilance is necessary to discover new outbreaks — effective control must be applied to keep them from attaining epidemic proportions and causing widespread damage.

Jefferson National Forest people apply the control measures needed to hold destruction to a minimum. Development measures are also applied to make the National Forest ever more productive and of greater value to its stockholders — the American people.

Much Has Been Accomplished

Including the purchase of land, the United States has invested \$6.5 million in the protection, improvement, and management of Jefferson National Forest since its beginning in 1911. Many of the activities and accomplishments resulting from this expenditure have been discussed in this booklet. Statistics on major accomplishments will be presented later.

This expenditure of public funds has made of Jefferson National Forest a valuable public property. The land is far more productive than at time of purchase — resources of superior quality are being produced in greater quantity. The needs of more people are being fulfilled. Physical improvements, which have been built, have expedited the care and development of resources and have made it possible for more people to enjoy them.

Some National Forest activities, notably those associated with permitted use of National Forest land or resources, produce revenue. In fiscal year 1963, Jefferson National Forest's income was about \$118,000, chiefly from the harvest of timber. In accordance with legal requirements, 25 percent of this sum was allotted the Counties in

which National Forest land is located, while 10 percent was programmed to Jefferson National Forest for maintenance or construction of forest roads and trails. The remainder, deposited in the Treasury of the United States, helps offset the cost of operating this unit of the National Forest system.

Numerous and noteworthy though accomplishments are, the intensive care must continue. Much additional development and improvement work must be performed to enable Jefferson National Forest to continue satisfying the ever-increasing requirements of a rapidly expanding population.

Much Remains To Be Done

With respect to resources and values forest land produces, this is certain—the need for them is increasing and will continue to increase for a long time to come. This statement is based upon the expected increase in population, the ever-higher standards of living of the American people, development of new products, and other factors.

In the field of outdoor recreation alone, the experience of Jefferson National Forest is illustrative of this increasing need. Recreation use of this unit totaled 13,000 visits in 1944. By 1963 the number had increased to more than 1.9 million visits. Five million visitor days use are expected in 1976 and 10 million in the year 2000.

Equally dramatic increases in demand for all resources of all the National Forests are expected and prompted preparation of a *National Forest Development Program* submitted to Congress by the President late in 1961.

The development program contemplates, for Jefferson National Forest, a substantial increase in services and improvements including those needed to take care of the increasing recreation use. Family camping and picnicking units will be increased in number from 371 to 3,145 by 1970. Hunter camp sites will be increased from 181 to 440 in the same period of time.

In the vital fields of water and soil management, the development plan contemplates surveys of 222,000 acres and construction of 10 flood prevention projects. These activities are necessary to insure a maximum production of clean water on watersheds within the National Forest.

Similarly extensive and carefully considered measures are planned in wildlife management in order that game and fish populations may keep pace with anticipated increases in use by sportsmen. (Hunting and fishing have increased from 40,000 visits in 1950 to nearly 500,000 in 1962 and will continue to increase.) Much of the planned work is in habitat improvement; it will include 46 miles of fishing stream improvement and an increase in the number of wildlife clearings from the present 923 to 1,400. Wildlife watering facilities are to be increased from 71 to 249. Plans also include development of additional fishing lakes and ponds.

In timber management, the development program includes activities that will materially increase the volume of timber to be harvested each year for commodity use. Activities that will help bring this increase about include more intensive inventories of timber resources, carefully developed timber management plans, intensified forest protection, 90,000 acres of timber improvement work, and the planting or seeding of 14,000 acres of land now idle or only partially productive.

Access to resources and more intensive management and protection are to be expedited by expanding the forest road system from the present mileage of 328 to a planned total of 536 miles by 1970.

Other activities which will help bring about needed increases in production include the construction of service buildings, lookout towers, radio installations, and heliports. Protection against destructive elements will be intensified by the application of fire hazard reduction measures, the construction of many miles of fire breaks, and by expanding manpower, equipment, and aerial operations. Intensifying and accelerating detection, prevention, and control measures will reduce destruction by insects and diseases.

Application of these activities and improvement measures will enable Jefferson National Forest to produce greater volumes of forest products and benefits and make them more readily available for the welfare of the Nation.



Gatewood Reservoir, Jefferson National Forest.

STATISTICS ABOUT JEFFERSON NATIONAL FOREST

Location and Area:

State and County	Area Within Forest Boundary	Area Owned by United States
A c r e s		
Kentucky		
Letcher County	40,205	—
Pike	14,409	116
	54,614	116
Virginia		
Bedford	39,350	18,792
Bland	203,827	21,247
Botetourt	149,639	56,272
Buchanan	160	—
Carroll	12,454	4,325
Craig	179,642	112,462
Dickinson	31,891	9,003
Giles	116,520	50,872
Grayson	55,405	13,446
Lee	38,189	9,895
Montgomery	39,008	17,805
Pulaski	54,900	18,763
Roanoke	10,015	1,845
Rockbridge	43,610	19,158
Russell	8,915	—
Scott	59,539	30,912
Smyth	157,632	61,611
Tazewell	59,578	5,256
Washington	62,422	17,328
Wise	147,944	29,020
Wythe	113,510	48,508
	1,584,150	546,520
West Virginia		
Monroe	29,651	—
Total	1,668,415	546,636

Timber Resource Data:

Volume harvested

Average, last 5 years; 13.6 million board feet per year.

Planned, next 5 years; 26.0 million board feet per year.

Timber improvement measures

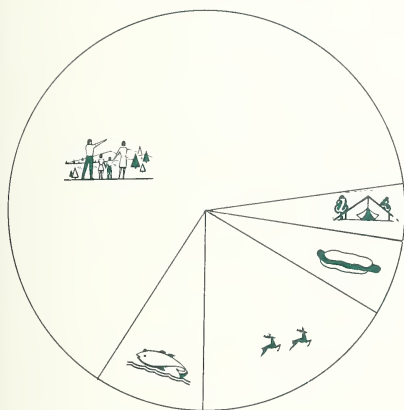
Applied to date 24,034 acres

Planned 89,170 acres

Reforestation accomplished 3,839 acres

Planned 14,060 acres

Recreation Use, 1963:



Primary Purpose	No. of Visits
Picknicking	115,900
Hunting	317,000
Fishing	170,300
General	
Enjoyment ...	1,212,700
*Other	86,200

Total 1,902,100

*Includes camping, swimming, hiking and riding.

Wildlife:

	Populations	Legal Kill
	1963	
White-tailed deer	26,500	3,175
Black bear	185	51
Turkey	1,850	330
Elk	65	No season

Fishing lakes and ponds; 18 with total area of 1,043 acres


Fishing streams; 500 miles


Fish stocked annually; 94,000 brook and rainbow trout









JEFFERSON NATIONAL FOREST — RECREATION AREAS

Numbers refer to locations on map in center of booklet. Symbols indicate type of facilities;

Picnic Site, 

Camping, 

Swimming, 

Map No.	Name	Facilities		
1	High Knob			
2	Scott-Wise			
3	Skulls Gap			
4	Flatwoods			
5	Long Branch			
6	Fountain			
7	Hurricane			
8	Comers Rock			
9	Big Bend			
10	Raccoon Branch			
11	White Rocks			
12	The Pines			
13	Cave Mountain			
14	Middle Creek			
15	North Creek			

Rest rooms, water, refuse cans, and campfire grates are provided at all of the above areas.

Jefferson National Forest

is one of 154 National Forests managed by the Forest Service of the U. S. Department of Agriculture. Its activities are planned and directed by a Forest Supervisor, a number of professional assistants, and a business management unit with offices in Roanoke, Virginia. District Forest Rangers and their assistants, responsible for on-the-ground activities, are located in Blacksburg, Wise, New Castle, Natural Bridge Station, Marion, and Wytheville, all in Virginia.

THE NATIONAL FORESTS

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